Special print - ERA - Koropon ship Oct. 16 h

**Work Order ID 91389**
*October-05-12 2:35:07 PM*

*91389*



**Item ID:** D350-636-015 **Accept** *N900040100* **Setup Start** *NS1*
**Revision ID:**
**Item Name:** Skidtube STD w/ Training Wearplates, LH **Stop** *NS2*
**Start Date:** 10/05/12 **Start Qty:** 1.00 *1* **Cust Item ID:**
**Required Date:** 10/12/12 **Req'd Qty:** 1.00 *1* **Customer:**
**Reference:**

**Approvals:** **Process Plan:** h **Date:** _____ **Tooling:** _____ **Date:** _____ **Run Start** *NR1*
**QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____ **Stop** *NR2*

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|---|---|---|---|---|---|---|---|

| Draw Nbr | Revision Nbr |
|---|---|
| D3492 | C |
| D4168 | A |
| IIN-D350-636 | I |

100 0.00
*100* DOCUMENT CONTROL
DC **Memo** 0.00
Document Control Photocopy blue file and type labels per PPP D350-636-015 CHG 004

CR-3213-4-3
M121700

DQA: _____ Date: _____

NCR: Yes / No

# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

**DISPOSITION**

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

**AGAINST DEPARTMENT/PROCESS**

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐

| Root Cause | | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Setup | ☐ | | | | | | | | | |
| Other | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

**FAULT CATEGORY**

**Landing Gear**

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

**General**

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other _____

# Work Order ID 91389

*October-05-12 2:35:07 PM*

*91389*



**Item ID:** D350-636-015 **Accept** *N900040100* **Setup Start** *NS1*

**Revision ID:** **Stop** *NS2*

**Item Name:** Skidtube STD w/ Training Wearplates, LH

**Start Date:** 10/05/12 **Start Qty:** 1.00 *1*

**Required Date:** 10/12/12 **Req'd Qty:** 1.00 *1*

**Reference:**

**Cust Item ID:**

**Customer:**

**Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

**QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

**Run Start** *NR1*

**Stop** *NR2*

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|---|---|---|---|---|---|---|---|
| 110 | | 0.00 | | | | | | | |
| *110* | Skidtubes | | | | | | | | |
| Skidtubes | | 0.00 | | | | | | | |
| Skidtubes | | | | | | | | | |

**Memo**

1- Pick D2600-3 Bent

2- Deburr FWD and AFT ends, remove bending marks. Scribe batch# inside AFT end per dwg D4168

3- Drill pilot holes for blade fitting bolt holes using DT8983. Open to 0.500", deburr, section H-H

4- Locate DT8330 off of blade fitting bolt holes and drill pilot holes for blade fitting, section H-H

5- Drill fwd step holes using DT9616. Ensure proper positioning. All holes as per dwg D4168, detail A

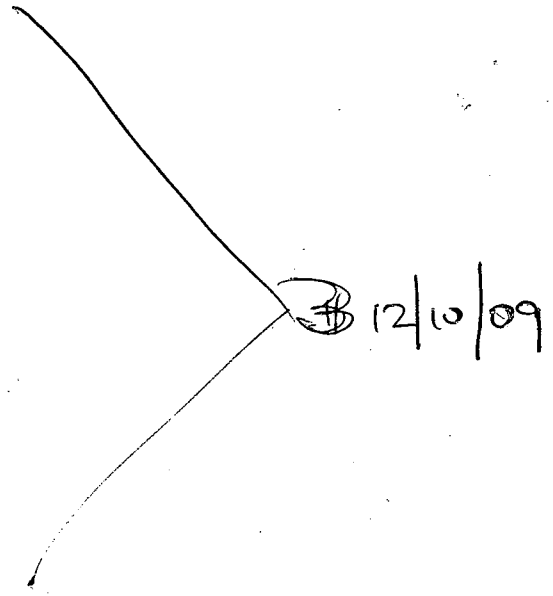
6- Drill pilot holes as per Dwg D4168 sheet 4 (D4168-1 details).Drill using drill Jig DT8150 & DT8863A for first side only DT8863B for second side (detail B)

7- Clecko DT8863B on second side of tube and drill pilot holes for detail B. ***SECOND SIDE***

8- Drill most FWD wearplate hole using DT9678 locating off of 66.54" hole.

9-Open up holes of Detail A to 0.297" (total of 2 holes per side) and .201" (total of 1 hole per side) open holes of detail D section H-H to 0.500" as per dwg D4168

10-Weld D2744 Cap as per Dwg D4168 and QSI 004.Fill grooves in bend left from bending as per QSI 004



DQA: _____ Date: _____

NCR: Yes / No

# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

**DISPOSITION**

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

**AGAINST DEPARTMENT/PROCESS**

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐

| Root Cause | | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Setup | ☐ | | | | | | | | | |
| Other | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

## FAULT CATEGORY

**Landing Gear**

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

**General**

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other _____

**Item ID:** D350-636-015 **Accept** *N900040100* **Setup Start** *NS1*
**Revision ID:** **Stop** *NS2*
**Item Name:** Skidtube STD w/ Training Wearplates, LH
**Start Date:** 10/05/12 **Start Qty:** 1.00 *1*
**Required Date:** 10/12/12 **Req'd Qty:** 1.00 *1*
**Reference:**
**Cust Item ID:**
**Customer:**

**Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Run Start** *NR1*
**QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____ **Stop** *NR2*

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|---|---|---|---|---|---|---|---|
| | A/R Aluminum Rod batch: M122399 | | BE12-1009 | | | | | | |
| | 11-Grind welds flush as per Dwg D4168 | | 12/10/10 | | | | | | |
| 120 *120* QC Quality Control | QC10- Inspect visual per QSI004- ground welds | 0.00 | DAS 16 | | | | | | |
| | **Memo** | 0.00 | 12/10/10 | | | | | | |
| 130 *130* QC Quality Control | QC5- Inspect part completeness to step on W/O | 0.00 | DAS 16 | | | | | | |
| | **Memo** | 0.00 | 12/10/10 | | | | | | |

DQA: _____ Date: _____

NCR: Yes / No

# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

**DISPOSITION**

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

**AGAINST DEPARTMENT/PROCESS**

| | | | | | |
|---|---|---|---|---|---|
| Skid-tube ☐ | Crosstube ☐ | Water Jet ☐ | Engineering ☐ |
| Machining ☐ | Small Fab ☐ | Prod. Eng. Coor. ☐ | Quality ☐ |
| Thermoforming ☐ | Finishing ☐ | Rec/Store/Packaging ☐ | Other ☐ |
| Large Fab ☐ | Composite ☐ | Supplier ☐ | |

| Root Cause | | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Setup | ☐ | | | | | | | | | |
| Other | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

**FAULT CATEGORY**

**Landing Gear**

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

**General**

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other _____

# Work Order ID 91389

*October-05-12 2:35:07 PM*

*91389*

**Item ID:** D350-636-015 **Accept** *N900040100* **Setup Start** *NS1*

**Revision ID:** **Stop** *NS2*

**Item Name:** Skidtube STD w/ Training Wearplates, LH

**Start Date:** 10/05/12 **Start Qty:** 1.00 *1*

**Required Date:** 10/12/12 **Req'd Qty:** 1.00 *1*

**Reference:**

**Cust Item ID:**

**Customer:**

**Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

**QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

**Run Start** *NR1*

**Stop** *NR2*

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|---|---|---|---|---|---|---|---|
| 140 | Chemical Conversion Coat per QSI005 4.1 | 0.00 | | | | | | | |
| *140* | | | | | | 1 | BB | 12/10/10 | |
| HandFinish | **Memo** | 0.00 | | | | | | | |
| Hand Finishing | | | | | | | | | |
| 150 | QC3- Inspect Part Finish | 0.00 | | | | | | | |
| *150* | QC7 | | | | | (1) | SAD | 12-16-10 | |
| QC | **Memo** | 0.00 | | | | | | | |
| Quality Control | | | | | | | | | |

DQA: _____ Date: _____

NCR: Yes / No

# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

**DISPOSITION**

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

**AGAINST DEPARTMENT/PROCESS**

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐

| Root Cause | | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Setup | ☐ | | | | | | | | | |
| Other | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

## FAULT CATEGORY

**Landing Gear**

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

**General**

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other

_____

_____

_____

**Item ID:** D350-636-015 **Accept** *N900040100* **Setup Start** *NS1*
**Revision ID:** **Stop** *NS2*
**Item Name:** Skidtube STD w/ Training Wearplates, LH
**Start Date:** 10/05/12 **Start Qty:** 1.00 *1*
**Required Date:** 10/12/12 **Req'd Qty:** 1.00 *1*
**Reference:**
**Cust Item ID:**
**Customer:**

**Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
**QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

**Run Start** *NR1*
**Stop** *NR2*

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|---|---|---|---|---|---|---|---|
| 160 | | 0.00 | | | | | | | |
| *160* | Skidtubes | | | | | | | | |
| Skidtubes | **Memo** | 0.00 | | | | | | | |
| Skidtubes | | | | | | | | | |

1-Open up holes of Detail C and ground handling section AL-AL to 0.625" (total of 8 holes per side)
as per dwg D4168.

2-Open up holes of Detail B to 0.750" (total of 4 holes per side)
as per dwg D4168.

3- Open float hole to 0.500" (4 per side) section AJ-AJ

Open wearplate holes to size as per dwg (4 holes per sides) , section CG-CG

4-Chamfer holes of Detail B, C, ground handling section AL-AL and float holes section AJ-AJ per dwg D4168 (welding instructions on sheet 8)

5-Deburr and blow out all chips from inside of tube

6- Prepare tube for welding, remove alodine as required.

7-Bond web D2739 in place as per QSI 015
A/R Sikaflex-291 batch: 123025 exp. date: 12/06/22

8- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D4168 and D4170-1 & QSI004
(welding instructions on sheet 8)
A/R Aluminum Rod batch: m122399

9- At section AJ-AJ drill out x-bolt spacer to 0.404"

12/10/10

DQA: _____ Date: _____

NCR: Yes / No

# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

**DISPOSITION**

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

**AGAINST DEPARTMENT/PROCESS**

| | | | | | |
|---|---|---|---|---|---|
| Skid-tube ☐ | Crosstube ☐ | Water Jet ☐ | Engineering ☐ |
| Machining ☐ | Small Fab ☐ | Prod. Eng. Coor. ☐ | Quality ☐ |
| Thermoforming ☐ | Finishing ☐ | Rec/Store/Packaging ☐ | Other ☐ |
| Large Fab ☐ | Composite ☐ | Supplier ☐ | |

| Root Cause | | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Setup | ☐ | | | | | | | | | |
| Other | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

## FAULT CATEGORY

**Landing Gear**

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

**General**

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other _____

**Item ID:** D350-636-015 **Accept** *N900040100* **Setup Start** *NS1*
**Revision ID:** **Stop** *NS2*
**Item Name:** Skidtube STD w/ Training Wearplates, LH
**Start Date:** 10/05/12 **Start Qty:** 1.00 *1* **Cust Item ID:**
**Required Date:** 10/12/12 **Req'd Qty:** 1.00 *1* **Customer:**
**Reference:**

**Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Run Start** *NR1*
**QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____ **Stop** *NR2*

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|---|---|---|---|---|---|---|---|
| | 10-Grind welds flush as per Dwg D4168 | BB 12/10/11 | | | | | | | |
| | 11-Spot face ground handling holes section (total of 4 places per side) as per dwg D4168, section AL-AL | BB 12/10/11 | | | | | | | |
| | 12- C'bore section CG-CG | DP 12-10-12 | | | | | | | |
| | 13- Deburr holes | BB 12/10/11 | | | | | | | |
| | ********** FOR DELUXE SKIDTUBE IF APPLICABLE DRILL TOW RING HOLE IN TUBE ********** | BB 12/10/11 | | | | | | | |
| 170 | QC10- Inspect visual per QSI004- ground welds | 0.00 DAS 16 8-30 17/10/12 | | | | | | | |
| *170* QC Quality Control | **Memo** | 0.00 | | | | | | | |

DQA: _____ Date: _____

NCR: Yes / No

# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

**DISPOSITION**

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

**AGAINST DEPARTMENT/PROCESS**

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐

| Root Cause | | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Setup | ☐ | | | | | | | | | |
| Other | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

## FAULT CATEGORY

**Landing Gear**

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

**General**

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other _____

**Item ID:** D350-636-015 **Accept** *N900040100* **Setup Start** *NS1*
**Revision ID:** **Stop** *NS2*
**Item Name:** Skidtube STD w/ Training Wearplates, LH
**Start Date:** 10/05/12 **Start Qty:** 1.00 *1*
**Required Date:** 10/12/12 **Req'd Qty:** 1.00 *1*
**Reference:**
**Cust Item ID:**
**Customer:**

**Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
**QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

**Run Start** *NR1*
**Stop** *NR2*

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|---|---|---|---|---|---|---|---|
| 180 *180* QC Quality Control | QC5- Inspect part completeness to step on W/O | 0.00 | | | | | | | |
| | **Memo** | 0.00 | | | | | | | |
| 190 *190* HandFinish Hand Finishing | Pressure Wash per QSI005 4.3 | 0.00 | | | | 1 | | | 12-10-13 |
| | **Memo** Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch. | 0.00 | | | | | | | |
| 200 *200* Powdercoat Powder Coating | White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum | 0.00 | | | | | | | |
| | **Memo** START TIME: _____ OVEN TEMPERATURE: _____ FINISH TIME: _____ | 0.00 | | | | 1 | | | 12-10-15 |

DAS 16 9-69 12/10/12

See attached

DAS 05 9-69

DQA: _____ Date: _____

NCR: Yes / No

# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

**DISPOSITION**

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

**AGAINST DEPARTMENT/PROCESS**

| | | | | | |
|---|---|---|---|---|---|
| Skid-tube ☐ | Crosstube ☐ | Water Jet ☐ | Engineering ☐ |
| Machining ☐ | Small Fab ☐ | Prod. Eng. Coor. ☐ | Quality ☐ |
| Thermoforming ☐ | Finishing ☐ | Rec/Store/Packaging ☐ | Other ☐ |
| Large Fab ☐ | Composite ☐ | Supplier ☐ | ☐ |

| Root Cause | | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Setup | ☐ | | | | | | | | | |
| Other | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

**FAULT CATEGORY**

**Landing Gear**

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

**General**

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other

_____

_____

_____

| | |
|---|---|
| | ERA |
| Primer | Sherwin Williams CM0483928 |
| Paint | Polyurethane with Anti Mar Teflon additive CM0143603GA |
| Clear coat | CM0571080GA |

DAS 05 8-89

| | |
|---|---|
| | AAI |
| | ~~Anodize~~ |
| | Alodine |
| | ~~[illegible]~~ |
| Primer | 50/50 mix - Super Koropon and EC2216 |
| Paint | Imron 555X |

IX 12·10·15

~~11·11·23~~

| | |
|---|---|
| | Apical |
| primer | IAW MIL-P-23377J, TYPE 1 CLASS N & |
| paint | Epoxy paint Cardinal 7125-E10192 |

76335
76334

DQA: _____ Date: _____

NCR: Yes / No

# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

**DISPOSITION**

Rework ☐
Scrap ☐
Use-as-is ☐
Work Order Update ☐

**AGAINST DEPARTMENT/PROCESS**

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

| Root Cause | | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Setup | ☐ | | | | | | | | | |
| Other | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

**FAULT CATEGORY**

**Landing Gear**

☐ Bending
☐ Centre Not Concentric to O/S
☐ Cracks
☐ Crushed/Crimped
☐ Cuffs
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Ripples in Bend
☐ Torque Waves in Extrusion
☐ Turning Sequence
☐ Wave/Twist in Tube

**General**

☐ Bend
☐ BOM/Route
☐ Broken/Damaged
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drill Holes
☐ Drawing
☐ Finish
☐ Folio
☐ Grain
☐ Hardware
☐ Inspection Incomplete
☐ Instructions Incomplete/Unclear
☐ Maintenance
☐ Mislabeled
☐ Misread
☐ Offset
☐ Out of Calibration
☐ Out of Sequence
☐ Outside Dimensions
☐ Ovalized
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge
☐ Pressure/Forced
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other

_____
_____
_____

**Item ID:** D350-636-015 **Accept** *N900040100* **Setup Start** *NS1*
**Revision ID:** **Stop** *NS2*
**Item Name:** Skidtube STD w/ Training Wearplates, LH
**Start Date:** 10/05/12 **Start Qty:** 1.00 *1*
**Required Date:** 10/12/12 **Req'd Qty:** 1.00 *1*
**Reference:**
**Cust Item ID:**
**Customer:**

**Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
**QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

**Run Start** *NR1*
**Stop** *NR2*

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|---|---|---|---|---|---|---|---|
| 210 | QC3- Inspect Part Finish | 0.00 | | | | | | | |
| *210* | | | | | | | | | |
| QC | **Memo** | 0.00 | | | | 1 | 0 | | 12/10/17 |
| Quality Control | Inspect for foreign object per QSI 024 | | | | | | | | |
| 220 | | 0.00 | | | | | | | |
| *220* | HandFinishing | | | | | | | | |
| HandFinish | **Memo** | 0.00 | | | | 1 | 0 | | 12/10/17 |
| Hand Finishing | 1- Install inserts as per Dwg D4168 | | | | | | | | |

DQA: _____ Date: _____

NCR: Yes / No

# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

**DISPOSITION**

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

**AGAINST DEPARTMENT/PROCESS**

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐

| Root Cause | | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Setup | ☐ | | | | | | | | | |
| Other | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

**FAULT CATEGORY**

**Landing Gear**

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

**General**

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other _____

**Work Order ID 91389**
*October-05-12 2:35:07 PM*

*91389*

**Item ID:** D350-636-015
**Revision ID:**
**Item Name:** Skidtube STD w/ Training Wearplates, LH
**Start Date:** 10/05/12 **Start Qty:** 1.00 *1*
**Required Date:** 10/12/12 **Req'd Qty:** 1.00 *1*
**Reference:**

**Accept** *N900040100*
**Setup** **Start** *NS1*
**Stop** *NS2*
**Cust Item ID:**
**Customer:**

**Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
**QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

**Run** **Start** *NR1*
**Stop** *NR2*

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|---|---|---|---|---|---|---|---|
| 230 *230* HandFinish Hand Finishing | HandFinishing | 0.00 | | | | 1 HH | ¢ | JU | 11/10/17 |
| | **Memo** 1-Inspect for Foreign Objects | 0.00 | | | | | | | |
| | 2-Spray inside of tube with "LPS-3" batch: N/A | | | | | | | | |
| | 3-Install blade fitting D3488-041, wearshoes and ground handling hardware as per dwg D4168 SIKA FLEX 241 BATCH: M123025 EXP DATE: 13/03 | | | | | | | | |
| | 4-assemble o'ring to plug as per dwg D3492 and apply o'ring lube A/R 55-o'ring lube batch: M121651 | | | | | | | | |
| | 5-Coat all exposed fasteners with "LPS Procyon" batch: M114596 | | | | | | | | |
| 240 *240* QC Quality Control | QC5- Inspect part completeness to step on W/O | 0.00 | | | | 1 | | | |
| | **Memo** | 0.00 | | | | | | | |

SMP
10/10/18

DQA: _____ Date: _____

NCR: Yes / No

# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

**DISPOSITION**

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

**AGAINST DEPARTMENT/PROCESS**

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐

| Root Cause | | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Setup | ☐ | | | | | | | | | |
| Other | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

**FAULT CATEGORY**

**Landing Gear**

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

**General**

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other _____

**Item ID:** D350-636-015 **Accept** *N900040100* **Setup Start** *NS1*
**Revision ID:** **Stop** *NS2*
**Item Name:** Skidtube STD w/ Training Wearplates, LH
**Start Date:** 10/05/12 **Start Qty:** 1.00 *1*
**Required Date:** 10/12/12 **Req'd Qty:** 1.00 *1*
**Reference:**
**Cust Item ID:**
**Customer:**

**Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
**QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

**Run Start** *NR1*
**Stop** *NR2*

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|---|---|---|---|---|---|---|---|
| 250 *250* Packaging Packaging | Pick Kit | 0.00 | | | | | | 12/10/12 | |
| | **Memo** If making a D350-636-215 pick kit will only requires: 1 X AN3C37A 1 X AN3C34A 1 X AN3C42A 2 X D3493-1 | 0.00 | | | | | | | |
| 260 *260* QC Quality Control | QC4- 100% Inspect kits for completeness | 0.00 | | | | | | | |
| | **Memo** ******ensure antiseize is on AN8C21A bolts******* | 0.00 | | | | | | | |
| 270 *270* Packaging Packaging | Packaging | 0.00 | | | | | | 12/10/12 | |
| | **Memo** Identify and pack for shipping as per PPPD350-636-015 Location:_____ PPP rev:_____ | 0.00 | | | | | | | |

DAS 16 9-69 12/10/12

PPP 91391

DQA: _____ Date: _____

NCR: Yes / No

# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

**DISPOSITION**

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

**AGAINST DEPARTMENT/PROCESS**

| | | | | | |
|---|---|---|---|---|---|
| Skid-tube ☐ | Crosstube ☐ | Water Jet ☐ | Engineering ☐ |
| Machining ☐ | Small Fab ☐ | Prod. Eng. Coor. ☐ | Quality ☐ |
| Thermoforming ☐ | Finishing ☐ | Rec/Store/Packaging ☐ | Other ☐ |
| Large Fab ☐ | Composite ☐ | Supplier ☐ | ☐ |

| Root Cause | | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Setup | ☐ | | | | | | | | | |
| Other | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

**FAULT CATEGORY**

**Landing Gear**

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

**General**

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other

_____

_____

_____

**Item ID:** D350-636-015
**Revision ID:**
**Item Name:** Skidtube STD w/ Training Wearplates, LH
**Start Date:** 10/05/12 **Start Qty:** 1.00 *1*
**Required Date:** 10/12/12 **Req'd Qty:** 1.00 *1*
**Reference:**

**Accept** *N900040100*
**Setup Start** *NS1*
**Stop** *NS2*
**Cust Item ID:**
**Customer:**

**Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
**QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

**Run Start** *NR1*
**Stop** *NR2*

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|---|---|---|---|---|---|---|---|
| 280 | QC21- Final Inspection - Work Order Release | 0.00 | | | | | | | |
| *280* QC Quality Control | Memo | 0.00 | | | | _____ | MLS | 12-10-19 | |

12-10-19

DQA: _____ Date: _____

NCR: Yes / No

# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

**DISPOSITION**

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

**AGAINST DEPARTMENT/PROCESS**

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐

| Root Cause | | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Setup | ☐ | | | | | | | | | |
| Other | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

## FAULT CATEGORY

**Landing Gear**

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

**General**

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other

_____

_____

_____

# Picklist Print

*October-05-12 2:35:01 PM*



15

**Work Order ID:** 91389

**Parent Item:** D350-636-015

**Parent Item Name:** Skidtube STD w/ Training Wearplates, LH

**Start Date:** 10/05/12 **Required Date:** 10/12/12

**Start Qty:** 1.00 **Required Qty:** 1.00

**Comments:** IPP rev:A 10.09.28 new issue DD verf:EC IPP Rev:B 11.04.14 ecn11-553 DD verf:EC IPP Rev:C 11.10.18 as per NCR 11-906 DD verf:EC IPP Rev:D 112.04.16 AS PER ECN 12-542 DD verf:EC

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AN3C34A** BOLT | | Purchased | No | | | 230 | Each | 22.0000 | 1 | 1 | | | |

| Location | Loc Qty | Loc Code |
|---|---|---|
| ST353 | 22 | |
| 116075 | 4 | |
| 117514 | 18 | |

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AN3C36A** BOLT | | Purchased | No | | | 230 | Each | 172.0000 | 4 | 4 | | | |

| Location | Loc Qty | Loc Code |
|---|---|---|
| FG | 24 | |
| 101261 | 4 | |
| 122204 | 20 | |
| ST353 | 148 | |
| 116590 | 0 | |
| 119083 | 1 | |
| 119324 | 3 | |
| 121276 | 4 | |
| 121388 | 5 | |
| 121689 | 50 | |
| 122204 | 67 | |
| 122491 | 14 | |
| 15924 | 4 | |

DQA: _____ Date: _____

NCR: Yes / No

# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

**DISPOSITION**

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

**AGAINST DEPARTMENT/PROCESS**

| | | | | | |
|---|---|---|---|---|---|
| Skid-tube ☐ | Crosstube ☐ | Water Jet ☐ | Engineering ☐ |
| Machining ☐ | Small Fab ☐ | Prod. Eng. Coor. ☐ | Quality ☐ |
| Thermoforming ☐ | Finishing ☐ | Rec/Store/Packaging ☐ | Other ☐ |
| Large Fab ☐ | Composite ☐ | Supplier ☐ | ☐ |

| Root Cause | | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Setup | ☐ | | | | | | | | | |
| Other | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

**FAULT CATEGORY**

**Landing Gear**

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

**General**

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other _____

**Work Order ID:** 91389

**Parent Item:** D350-636-015

**Parent Item Name:** Skidtube STD w/ Training Wearplates, LH

**Start Date:** 10/05/12 **Required Date:** 10/12/12

**Start Qty:** 1.00 **Required Qty:** 1.00

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **AN3C37A** BOLT | Purchased | No | | 230 | Each | 145.0000 | 1 | 1 |

| Location | Loc Qty | Loc Code |
|---|---|---|
| ST324 | 50 | |
| 122204 | 50 | |
| ST353 | 78 | |
| 122491 | 50 | |
| 122843 | 28 | |
| ST354 | 17 | |
| 116874 | 11 | |
| 117010 | 2 | |
| 120422 | 3 | |
| 121584 | 1 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **AN3C42A** BOLT | Purchased | No | | 230 | Each | 85.0000 | 1 | 1 |

| Location | Loc Qty | Loc Code |
|---|---|---|
| FG | 5 | |
| 121103 | 5 | |
| ST354 | 80 | |
| 106176 | 1 | |
| 120464 | 1 | |
| 122241 | 48 | |
| 122843 | 30 | |

DQA: _____ Date: _____

NCR: Yes / No

# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

**DISPOSITION**

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

**AGAINST DEPARTMENT/PROCESS**

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐

| Root Cause | | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Setup | ☐ | | | | | | | | | |
| Other | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

## FAULT CATEGORY

**Landing Gear**

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

**General**

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other _____

**Work Order ID:** 91389

**Parent Item:** D350-636-015

**Parent Item Name:** Skidtube STD w/ Training Wearplates, LH

**Start Date:** 10/05/12 **Required Date:** 10/12/12

**Start Qty:** 1.00 **Required Qty:** 1.00

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **D3492-1**<br>Plug | Manufactured | No | | 230 | Each | 89.0000 | 8 8 11/10/12 |

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| FP002 | 82 | | |
| 69531 | 8 | | |
| 74444 | 2 | | |
| 76235 | 4 | | |
| 88541 | 3 | | |
| 89363 | 40 | | X 7 |
| 90334 | 25 | | X 1 |
| FP-A | 7 | | |
| 83098 | 7 | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **D3492-3**<br>Plug | Manufactured | No | | 230 | Each | 183.0000 | 8 8 11/10/12 |

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| FP001 | 40 | | |
| 90322 | 40 | | |
| FP002 | 40 | | |
| 89291 | 40 | | |
| FP-A | 103 | | |
| 81967 | 5 | | |
| 83099 | 3 | | |
| 83529 | 46 | | |
| 85461 | 9 | | |
| 86865 | 40 | | X 8 |

DQA: _____ Date: _____

NCR: Yes / No

# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

**DISPOSITION**

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

**AGAINST DEPARTMENT/PROCESS**

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐

| Root Cause | | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Setup | ☐ | | | | | | | | | |
| Other | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

## FAULT CATEGORY

**Landing Gear**

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

**General**

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other _____

**Work Order ID:** 91389
**Parent Item:** D350-636-015
**Parent Item Name:** Skidtube STD w/ Training Wearplates, LH

**Start Date:** 10/05/12 **Required Date:** 10/12/12
**Start Qty:** 1.00 **Required Qty:** 1.00

**D3873-1** Manufactured No 230 Each 738.0000 7 7 12/10/17
Bushing

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| ST057 | 6 | | |
| 79561 | 6 | | |
| ST067 | 688 | | |
| 64760 | 1 | | |
| 68247 | 4 | | |
| 73829 | 19 | | |
| 73830 | 2 | | |
| 76791 | 17 | | |
| 79560 | 20 | | |
| 90492 | 625 | | |
| ST069 | 44 | | X7 |
| 87185 | 44 | | |

**D4154-041** Manufactured No 230 Each 2.0000 1 1 12/10/17
Wearplate Assembly
B90298

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| FP1 | 2 | | |
| 90298 | 2 | | |

**D4170-1** Manufactured No 230 Each 44.0000 4 4 BE 12-10-11
Bushing

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| LG | 22 | | |
| 82222 | 22 | | 4 |
| LG001 | 9 | | |
| 71844 | 5 | | |
| 82043 | 4 | | |
| LG002 | 13 | | |
| 90270 | 13 | | |

DQA: _____ Date: _____

NCR: Yes / No

# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

**DISPOSITION**

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

**AGAINST DEPARTMENT/PROCESS**

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐

| Root Cause | | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Setup | ☐ | | | | | | | | | |
| Other | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

## FAULT CATEGORY

**Landing Gear**

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

**General**

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other _____

**Work Order ID:** 91389

**Parent Item:** D350-636-015

**Parent Item Name:** Skidtube STD w/ Training Wearplates, LH

**Start Date:** 10/05/12 **Required Date:** 10/12/12

**Start Qty:** 1.00 **Required Qty:** 1.00

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **D4171-1**<br>Bushing | Manufactured | No | | 230 | Each | 3.0000 | 1 MH 1 11/10/12 |

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| ST104 | 3 | | |
| 82385 | 3 | | X1 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **MS21043-3**<br>Nut | Purchased | No | | 230 | Each | 609.0000 | 4 MH 4 11/10/12 |

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| FG | 72 | | |
| 103691 | 72 | | |
| ST301 | 124 | | |
| 118077 | 2 | | |
| 118614 | 7 | | |
| 118686 | 30 | | |
| 119758 | 20 | | |
| 121255 | 20 | | |
| 121708 | 45 | | X 1 |
| ST315 | 413 | | |
| 122993 | 413 | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **NAS1149C0363R**<br>Washer | Purchased | No | | 230 | Each | 4,676.0000 | 8 MH 8 11/10/12 |

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| 297 | 2000 | | |
| 122441 | 2000 | | |
| ST297 | 2676 | | |
| 114742 | 2476 | | X7 |
| 122063 | 200 | | |

DQA: _____ Date: _____

NCR: Yes / No

# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

**DISPOSITION**

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

**AGAINST DEPARTMENT/PROCESS**

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐

| Root Cause | | Date. | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Doc/Data | | | | | | | | | | |
| Equip/Tooling | | | | | | | | | | |
| Operator | | | | | | | | | | |
| Material | | | | | | | | | | |
| Setup | | | | | | | | | | |
| Other | | | | | | | | | | |
| Process | | | | | | | | | | |
| Supplier | | | | | | | | | | |
| Training | | | | | | | | | | |
| Unapproved | | | | | | | | | | |

## FAULT CATEGORY

**Landing Gear**

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

**General**

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other

_____

_____

_____

**Work Order ID:** 91389

**Parent Item:** D350-636-015

**Parent Item Name:** Skidtube STD w/ Training Wearplates, LH

**Start Date:** 10/05/12 **Required Date:** 10/12/12

**Start Qty:** 1.00 **Required Qty:** 1.00

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **NAS1149D0863J**<br>WASHER | Purchased | No | | 250 | Each | 157.0000 | 2 MM 2 12/10/12 |

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| ST298 | 157 | | |
| 118078 | 28 | | x2 |
| 119307 | 1 | | |
| 120308 | 28 | | |
| 121556 | 100 | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **NAS1515H3L**<br>WASHER | Purchased | No | | 230 | Each | 219.0000 | 4 MM 4 12/10/12 |

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| FG | 40 | | |
| 102472 | 40 | | |
| ST277 | 179 | | |
| 118686 | 3 | | |
| 120360 | 11 | | |
| 121556 | 45 | | |
| 122151 | 120 | | x4 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **NAS1611-010**<br>O-RING | Purchased | No | | 230 | Each | 140.0000 | 8 MM 8 12/10/12 |

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| FP001 | 140 | | |
| 110915 | 14 | | |
| 117460 | 8 | | |
| 118077 | 1 | | |
| 118612 | 3 | | |
| 119438 | 47 | | |
| 121259 | 2 | | |
| 121584 | 2 | | |
| 121723 | 7 | | |
| 122151 | 56 | | x8 |

DQA: _____ Date: _____

NCR: Yes / No

# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

**DISPOSITION**

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

**AGAINST DEPARTMENT/PROCESS**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Skid-tube | ☐ | Crosstube | ☐ | Water Jet | ☐ | Engineering | ☐ |
| Machining | ☐ | Small Fab | ☐ | Prod. Eng. Coor. | ☐ | Quality | ☐ |
| Thermoforming | ☐ | Finishing | ☐ | Rec/Store/Packaging | ☐ | Other | ☐ |
| Large Fab | ☐ | Composite | ☐ | Supplier | ☐ | | ☐ |

| Root Cause | | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Setup | ☐ | | | | | | | | | |
| Other | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

**FAULT CATEGORY**

**Landing Gear**

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

**General**

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other _____

**Work Order ID:** 91389

**Parent Item:** D350-636-015

**Parent Item Name:** Skidtube STD w/ Training Wearplates, LH

**Start Date:** 10/05/12 **Required Date:** 10/12/12

**Start Qty:** 1.00 **Required Qty:** 1.00

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **NAS1611-013**<br>O-RING | Purchased | No | | 230 | Each | 216.0000 | 8 | 8 11/10/17 |

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| FP001 | 216 | | |
| 116582 | 5 | | |
| 117291 | 2 | | |
| 117887 | 53 | | |
| 119623 | 36 | | |
| 121825 | 18 | | |
| 121826 | 2 | | |
| 122993 | 100 | | V6 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **D2744**<br>Cap | Manufactured | No | | 110 | Each | 32.0000 | 1 | 1 BG 12/10/09 |

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| LG002 | 32 | | |
| 62715 | 1 | | |
| 85506 | 31 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **D2600-3-BENT**<br>Extrusion Bent | Manufactured | No | | 110 | Each | 23.0000 | 1 | 1 BG 12/10/09 |

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| LG | 23 | | |
| 66875 | 7 | | |
| 73253 | 1 | | |
| 75021 | 1 | | |
| 75022 | 1 | | |
| 75023 | 1 | | |
| 81330 | 4 | | |
| 83305 | 1 | | |
| 88712 | 5 | | |
| 90251 | 2 | | |

DQA: _____ Date: _____

NCR: Yes / No

# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

**DISPOSITION**

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

**AGAINST DEPARTMENT/PROCESS**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Skid-tube | ☐ | Crosstube | ☐ | Water Jet | ☐ | Engineering | ☐ |
| Machining | ☐ | Small Fab | ☐ | Prod. Eng. Coor. | ☐ | Quality | ☐ |
| Thermoforming | ☐ | Finishing | ☐ | Rec/Store/Packaging | ☐ | Other | ☐ |
| Large Fab | ☐ | Composite | ☐ | Supplier | ☐ | | ☐ |

| Root Cause | | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Setup | ☐ | | | | | | | | | |
| Other | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

**FAULT CATEGORY**

**Landing Gear**

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

**General**

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other

_____

_____

_____

**Work Order ID:** 91389

**Parent Item:** D350-636-015

**Parent Item Name:** Skidtube STD w/ Training Wearplates, LH

**Start Date:** 10/05/12 **Required Date:** 10/12/12

**Start Qty:** 1.00 **Required Qty:** 1.00

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **D2743**<br>Crossbolt Spacer | Manufactured | No | | 160 | Each | 235.0000 | **8** | **8** BG 12-10-11 |

| Location | Loc Qty | Loc Code |
|---|---|---|
| LG | 161 | |
| 81965 | 23 | |
| 83262 | 2 | |
| 85459 | 14 | |
| 88504 | 122 | |
| LG001 | 74 | |
| 67766 | 4 | |
| 68251 | 3 | |
| 73403 | 64 | |
| 74445 | 1 | |
| 79517 | 2 | |

2
6

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **D2739**<br>350 I Beam | Manufactured | No | | 160 | Each | 5.0000 | **1** | **1** 1 RB 12/10/11 |

| Location | Loc Qty | Loc Code |
|---|---|---|
| LG | 5 | |
| 72155 | 1 | |
| 81508 | 1 | |
| 85487 | 1 | |
| 86615 | 1 | |
| 87734 | 1 | |

90350

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **D3490-3**<br>Gross Bolt Spacer | Manufactured | No | | 160 | Each | 34.0000 | **4** | **4** BG 12-10-11 |

| Location | Loc Qty | Loc Code |
|---|---|---|
| LG001 | 34 | |
| 86980 | 34 | |

4

DQA: _____ Date: _____

NCR: Yes / No

# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

**DISPOSITION**

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

**AGAINST DEPARTMENT/PROCESS**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Skid-tube | ☐ | Crosstube | ☐ | Water Jet | ☐ | Engineering | ☐ |
| Machining | ☐ | Small Fab | ☐ | Prod. Eng. Coor. | ☐ | Quality | ☐ |
| Thermoforming | ☐ | Finishing | ☐ | Rec/Store/Packaging | ☐ | Other | ☐ |
| Large Fab | ☐ | Composite | ☐ | Supplier | ☐ | | ☐ |

| Root Cause | | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Setup | ☐ | | | | | | | | | |
| Other | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

## FAULT CATEGORY

**Landing Gear**

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

**General**

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other

_____

_____

_____

**Work Order ID:** 91389

**Parent Item:** D350-636-015

**Parent Item Name:** Skidtube STD w/ Training Wearplates, LH

**Start Date:** 10/05/12 **Required Date:** 10/12/12

**Start Qty:** 1.00 **Required Qty:** 1.00

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **D3490-1**<br>Cross Bolt Spacer | Manufactured | No | | 160 | Each | 97.0000 | 4 | 4 BE 12-10-11 |

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| LG | 88 | | |
| 81976 | 2 | | |
| 86979 | 32 | | |
| 88617 | 54 | | 4 |
| LG001 | 9 | | |
| 62450 | 2 | | |
| 74875 | 4 | | |
| 77042 | 3 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **ALS4-1032-225**<br>Insert | Purchased | No | | 230 | Each | 2,586.0000 | 4 | 4 ll 10/17 |

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| FP-B | 1155 | | |
| 122290 | 1155 | | VJ |
| ST281 | 1408 | | |
| 108696 | 146 | | |
| 110768 | 62 | | |
| 118386 | 55 | | |
| 118966 | 68 | | |
| 121269 | 77 | | |
| 122827 | 1000 | | |
| ST282 | 23 | | |
| 120410 | 10 | | |
| 120451 | 13 | | |

DQA: _____ Date: _____

NCR: Yes / No

# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

**DISPOSITION**

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

**AGAINST DEPARTMENT/PROCESS**

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐

| Root Cause | | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Setup | ☐ | | | | | | | | | |
| Other | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

## FAULT CATEGORY

**Landing Gear**

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

**General**

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other _____

**Work Order ID:** 91389

**Parent Item:** D350-636-015

**Parent Item Name:** Skidtube STD w/ Training Wearplates, LH

**Start Date:** 10/05/12 **Required Date:** 10/12/12

**Start Qty:** 1.00 **Required Qty:** 1.00

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **AN8C35A**<br>BOLT | Purchased | No | | 230 | Each | 28.0000 | 1 | 1 12/10/12 |

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| FG | 5 | | |
| 121275 | 5 | | |
| FP002 | 22 | | |
| 115960 | 1 | | |
| 121275 | 21 | | x1 |
| ST346 | 1 | | |
| 114442 | 0 | | |
| 115188 | 0 | | |
| 115960 | 1 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **D3488-041**<br>Blade Fitting Assembly, LH | Manufactured | No | | 230 | Each | 21.0000 | 1 | 1 12/10/12 |

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| FP001 | 2 | | |
| 85807 | 2 | | x1 |
| FP002 | 19 | | |
| 83407 | 3 | | |
| 85733 | 4 | | |
| 88255 | 12 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **AN6C44A**<br>BOLT | Purchased | No | | 230 | Each | 110.0000 | 4 | 4 12/10/12 |

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| FG | 2 | | |
| 103964 | 2 | | |
| ST340 | 39 | | |
| 122491 | 39 | | |
| ST341 | 47 | | |
| 122843 | 47 | | x4 |
| ST343 | 22 | | |
| 121013 | 11 | | |
| 121167 | 2 | | |
| 122204 | 9 | | |

DQA: _____ Date: _____

NCR: Yes / No

# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

**DISPOSITION**

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

**AGAINST DEPARTMENT/PROCESS**

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐

| Root Cause | | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Setup | ☐ | | | | | | | | | |
| Other | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

## FAULT CATEGORY

**Landing Gear**

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

**General**

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other _____

**Work Order ID:** 91389
**Parent Item:** D350-636-015
**Parent Item Name:** Skidtube STD w/ Training Wearplates, LH

**Start Date:** 10/05/12 **Required Date:** 10/12/12
**Start Qty:** 1.00 **Required Qty:** 1.00

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **MS21083C8**<br>NUT | | Purchased | No | | 230 | Each | 50.0000 | 1 JL 1 11/10/17 |

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| 318 | 26 | | |
| 122452 | 26 | | |
| FP002 | 1 | | |
| 115884 | 1 | | |
| ST303 | 4 | | |
| 115884 | 0 | | |
| 118077 | 1 | | |
| 119309 | 2 | | |
| 119638 | 1 | | |
| ST321 | 19 | | |
| 122141 | 19 | | VL |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **D3631-1**<br>Washer | | Manufactured | No | | 230 | Each | 127.0000 | 8 JL 8 11/10/17 |

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| FG | 28 | | |
| 81874 | 2 | | |
| 83588 | 26 | | |
| FP-A | 84 | | |
| 89277 | 84 | | X 8 |
| ST072 | 15 | | |
| 68062 | 2 | | |
| 75548 | 13 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **AN960C10L**<br>washer 4 | NAS1149C0332R | Purchased | No | | 230 | Each | 21.0000 | 4 JL 4 11/10/17 |

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| ST | 21 | | |
| 107534 | 21 | MA1232-18 | VL |

DQA: _____ Date: _____

NCR: Yes / No

# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

**DISPOSITION**

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

**AGAINST DEPARTMENT/PROCESS**

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐

| Root Cause | | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Setup | ☐ | | | | | | | | | |
| Other | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

## FAULT CATEGORY

**Landing Gear**

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

**General**

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other

_____

_____

_____

**Work Order ID:** 91389

**Parent Item:** D350-636-015

**Parent Item Name:** Skidtube STD w/ Training Wearplates, LH

**Start Date:** 10/05/12 **Required Date:** 10/12/12

**Start Qty:** 1.00 **Required Qty:** 1.00

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **D2745**<br>Bushing | Manufactured | No | | 230 | Each | 126.0000 | **8** | **8** 11/10/17 |

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| FP | 122 | | |
| 79518 | 6 | | |
| 85416 | 12 | | X46 |
| 86870 | 24 | | |
| 87527 | 40 | | |
| 89303 | 40 | | X5 |
| FP001 | 4 | | |
| 69529 | 1 | | |
| 76142 | 1 | | |
| 83260 | 2 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **NAS1149C0832R**<br>WASHER | Purchased | No | | 230 | Each | 417.0000 | **1** | **1** 11/10/17 |

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| 296 | 200 | | |
| 122441 | 200 | | |
| ST297 | 217 | | |
| 114915 | 217 | | X1 |

DQA: _____ Date: _____

NCR: Yes / No

# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

**DISPOSITION**

Rework ☐
Scrap ☐
Use-as-is ☐
Work Order Update ☐

**AGAINST DEPARTMENT/PROCESS**

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

| Root Cause | | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Setup | ☐ | | | | | | | | | |
| Other | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

**FAULT CATEGORY**

**Landing Gear**

☐ Bending
☐ Centre Not Concentric to O/S
☐ Cracks
☐ Crushed/Crimped
☐ Cuffs
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Ripples in Bend
☐ Torque Waves in Extrusion
☐ Turning Sequence
☐ Wave/Twist in Tube

**General**

☐ Bend
☐ BOM/Route
☐ Broken/Damaged
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drill Holes
☐ Drawing
☐ Finish
☐ Folio
☐ Grain
☐ Hardware
☐ Inspection Incomplete
☐ Instructions Incomplete/Unclear
☐ Maintenance
☐ Mislabeled
☐ Misread
☐ Offset
☐ Out of Calibration
☐ Out of Sequence
☐ Outside Dimensions
☐ Ovalized
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge
☐ Pressure/Forced
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other

_____
_____
_____

**Work Order ID:** 91389

**Parent Item:** D350-636-015

**Parent Item Name:** Skidtube STD w/ Training Wearplates, LH

**Start Date:** 10/05/12 **Required Date:** 10/12/12

**Start Qty:** 1.00 **Required Qty:** 1.00

**AN3C6A** Purchased No 230 Each 1,071.0000 4 4 12/10/17

BOLT

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| FG | 10 | | |
| 122416 | 10 | | |
| FP001 | 1 | | |
| 111982 | 1 | | |
| ST351 | 1060 | | |
| 111982 | 2 | | |
| 116419 | 23 | | |
| 116549 | 2 | | |
| 116704 | 12 | | |
| 117619 | 10 | | |
| 117688 | 1 | | |
| 117872 | 5 | | |
| 118422 | 13 | | |
| 119449 | 21 | | |
| 120423 | 3 | | |
| 120693 | 38 | | |
| 121682 | 4 | | |
| 122416 | 426 | | YL |
| 122599 | 500 | | |

**MS21043-6** Purchased No 230 Each 460.0000 4 4 12/10/17

NUT

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| FG | 20 | | |
| 103693 | 20 | | |
| ST301 | 440 | | |
| 117887 | 4 | | |
| 120308 | 436 | | YL |

DQA: _____ Date: _____

NCR: Yes / No

# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

**DISPOSITION**

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

**AGAINST DEPARTMENT/PROCESS**

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐
- ☐

| Root Cause | | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Setup | ☐ | | | | | | | | | |
| Other | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

**FAULT CATEGORY**

**Landing Gear**

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

**General**

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other _____

**Work Order ID:** 91389

**Parent Item:** D350-636-015

**Parent Item Name:** Skidtube STD w/ Training Wearplates, LH

**Start Date:** 10/05/12 **Required Date:** 10/12/12

**Start Qty:** 1.00 **Required Qty:** 1.00

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **D3493-1**<br>Washer | Manufactured | No | | 250 | Each | 31.0000 | 2 |

| Location | Loc Qty | Loc Code |
|---|---|---|
| ST050 | 31 | |
| 77573 | 1 | |
| 82023 | 2 | |
| 83097 | 28 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **MS21083C8**<br>NUT | Purchased | No | | 250 | Each | 50.0000 | 2 |

| Location | Loc Qty | Loc Code |
|---|---|---|
| 318 | 26 | |
| 122452 | 26 | |
| FP002 | 1 | |
| 115884 | 1 | |
| ST303 | 4 | |
| 115884 | 0 | |
| 118077 | 1 | |
| 119309 | 2 | |
| 119638 | 1 | |
| ST321 | 19 | |
| 122141 | 19 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **AN8C21A**<br>BOLT | Purchased | No | | 250 | Each | 39.0000 | 2 |

| Location | Loc Qty | Loc Code |
|---|---|---|
| ST341 | 25 | |
| 122519 | 25 | |
| ST343 | 14 | |
| 118758 | 1 | |
| 122204 | 13 | |

DQA: _____ Date: _____

NCR: Yes / No

# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

**DISPOSITION**

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

**AGAINST DEPARTMENT/PROCESS**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Skid-tube | ☐ | Crosstube | ☐ | Water Jet | ☐ | Engineering | ☐ |
| Machining | ☐ | Small Fab | ☐ | Prod. Eng. Coor. | ☐ | Quality | ☐ |
| Thermoforming | ☐ | Finishing | ☐ | Rec/Store/Packaging | ☐ | Other | ☐ |
| Large Fab | ☐ | Composite | ☐ | Supplier | ☐ | | ☐ |

| Root Cause | | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Setup | ☐ | | | | | | | | | |
| Other | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

## FAULT CATEGORY

**Landing Gear**

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

**General**

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other _____

**Work Order ID:** **91389**
**Parent Item:** **D350-636-015**
**Parent Item Name:** Skidtube STD w/ Training Wearplates, LH

**Start Date:** 10/05/12 **Required Date:** 10/12/12
**Start Qty:** 1.00 **Required Qty:** 1.00

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **D2741**<br>Blade, 350 Skidtube | Manufactured | No | | 250 | Each | 61.0000 | 1 | 1 |

11/10/17

| Location | Loc Qty | Loc Code |
|---|---|---|
| FG | 2 | |
| 85480 | 2 | VI |
| ST | -10 | |
| ST466 | 69 | - |
| 71856 | 1 | |
| 85480 | 19 | |
| 88824 | 39 | |

DQA: _____ Date: _____

NCR: Yes / No

# WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

**DISPOSITION**

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

**AGAINST DEPARTMENT/PROCESS**

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐

| Root Cause | | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---|---|---|---|---|---|---|---|---|---|---|
| Doc/Data | ☐ | | | | | | | | | |
| Equip/Tooling | ☐ | | | | | | | | | |
| Operator | ☐ | | | | | | | | | |
| Material | ☐ | | | | | | | | | |
| Setup | ☐ | | | | | | | | | |
| Other | ☐ | | | | | | | | | |
| Process | ☐ | | | | | | | | | |
| Supplier | ☐ | | | | | | | | | |
| Training | ☐ | | | | | | | | | |
| Unapproved | ☐ | | | | | | | | | |

## FAULT CATEGORY

**Landing Gear**

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

**General**

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other _____

| QTY -041 | QTY -042 | QTY -043 | QTY -044 | PART NUMBER | DESCRIPTION |
|---|---|---|---|---|---|
| X | | | | D4168-041 | 350 SKIDTUBE ASSEMBLY, LH |
| | X | | | D4168-042 | 350 SKIDTUBE ASSEMBLY, RH |
| | | X | | D4168-043 | 350 SKIDTUBE ASSEMBLY, LH |
| | | | X | D4168-044 | 350 SKIDTUBE ASSEMBLY, RH |
| | | | | | |
| 1 | 1 | 1 | 1 | D2739 | WEB |
| 8 | 8 | 8 | 8 | D2743 | SPACER |
| 1 | 1 | 1 | 1 | D2744 | CAP |
| 8 | 8 | 8 | 8 | D2745 | BUSHING |
| 1 | | 1 | | D3488-041 | BLADE FITTING, LH |
| | 1 | | 1 | D3488-042 | BLADE FITTING, RH |
| 4 | 4 | 4 | 4 | D3490-1 | SPACER |
| 4 | 4 | | | D3490-3 | SPACER |
| | | 4 | 4 | D3490-5 | SPACER |
| 8 | 8 | 8 | 8 | D3492-041 | PLUG ASSEMBLY |
| 8 | 8 | | | D3492-043 | PLUG ASSEMBLY |
| | | 8 | 8 | D3492-045 | PLUG ASSEMBLY |
| 8 | 8 | 8 | 8 | D3631-1 | WASHER |
| 7 | 7 | 7 | 7 | D3873-1 | BUSHING |
| 1 | 1 | 1 | 1 | D4154-041 | WEARPLATE ASSEMBLY |
| 1 | | | | D4168-1 | SKIDTUBE WELDMENT, LH |
| | 1 | | | D4168-2 | SKIDTUBE WELDMENT, RH |
| | | 1 | | D4168-3 | SKIDTUBE WELDMENT, LH |
| | | | 1 | D4168-4 | SKIDTUBE WELDMENT, RH |
| 4 | 4 | 4 | 4 | D4170-1 | SPACER |
| 1 | 1 | 1 | 1 | D4171-1 | BUSHING |
| | | | | | |
| 4 | 4 | 4 | 4 | ALS4-1032-225 | INSERT |
| 4 | 4 | 4 | 4 | AN3C6A | BOLT |
| 1 | 1 | 1 | 1 | AN3C34A | BOLT |
| 4 | 4 | 4 | 4 | AN3C36A | BOLT |
| 4 | 4 | 4 | 4 | AN6C44A | BOLT |
| 1 | 1 | 1 | 1 | AN8C35A | BOLT |
| 9 | 9 | 9 | 9 | AN960C10 | WASHER (OR NAS1149CO363R) |
| 4 | 4 | 4 | 4 | AN960C10L | WASHER (OR NAS1149CO332R) |
| 1 | 1 | 1 | 1 | AN960C816L | WASHER (OR NAS1149CO832R) |
| 5 | 5 | 5 | 5 | MS21043-3 | NUT |
| 4 | 4 | 4 | 4 | MS21043-6 | NUT |
| 1 | 1 | 1 | 1 | MS21083C8 | NUT |
| 4 | 4 | 4 | 4 | NAS1515H3L | WASHER |

w/o 91389

RELEASED
2010 -09- 15

**GENERAL NOTES:**

1) MATERIAL: MAKE D4168-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
2) FINISH:
   CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
   POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
   BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: N/A
6) IDENTIFICATION: N/A
7) WEIGHT: D4168-041/-042/-043/-044 = 32.3 LBS
8) WELD PER DART QSI 004
9) FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
   MINIMUM YIELD TENSILE STRENGTH = 35 KSI
   MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
10) COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
11) SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL
12) SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

| REV. | DESCRIPTION | BY | DATE |
|---|---|---|---|
| A | NEW ISSUE | SC | 10.08.09 |

| | | |
|---|---|---|
| DESIGN | SC | DART AEROSPACE USA, INC. PORT HADLOCK, WA |
| DRAWN | SC | |
| CHECKED | | DRAWING NO. D4168 REV. A |
| MFG. APPR. | | SHEET 1 OF 11 |
| APPROVED | | TITLE 350 SKIDTUBE ASSEMBLY SCALE NTS |
| DE APPR. | | |
| DATE | 10.08.09 | |

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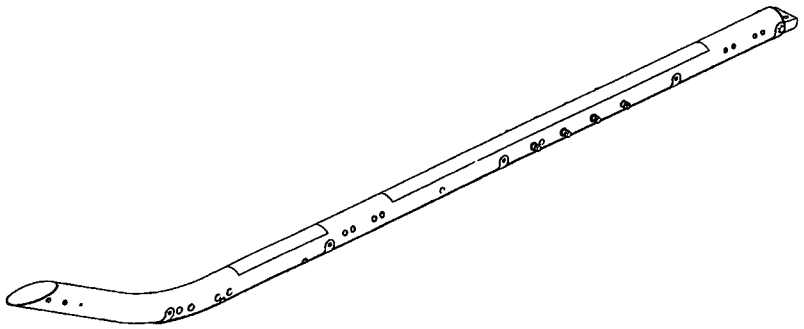
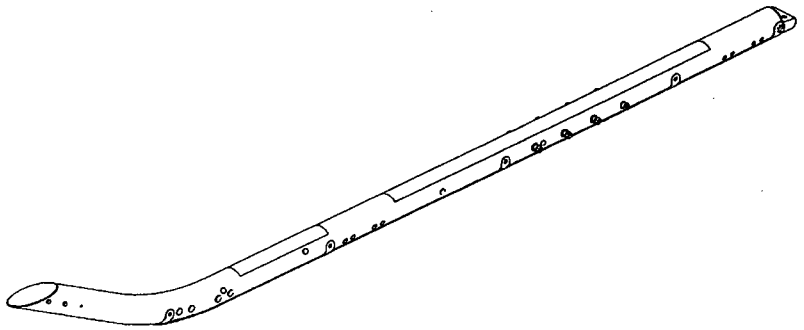


**D4168-041 350 SKIDTUBE ASSEMBLY, LH**



**D4168-042 350 SKIDTUBE ASSEMBLY, RH**

RELEASED
2010 -09- 15

| | | |
|---|---|---|
| DESIGN | SC | **DART AEROSPACE USA, INC.** PORT HADLOCK, WA |
| DRAWN | SC | |
| CHECKED | | DRAWING NO. D4168 REV. A |
| MFG. APPR. | | SHEET 2 OF 11 |
| APPROVED | | TITLE 350 SKIDTUBE ASSEMBLY SCALE NTS |
| DE APPR. | | |
| DATE | 10.08.09 | |

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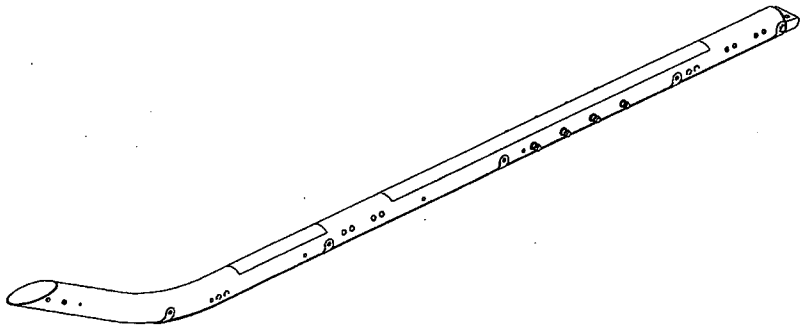
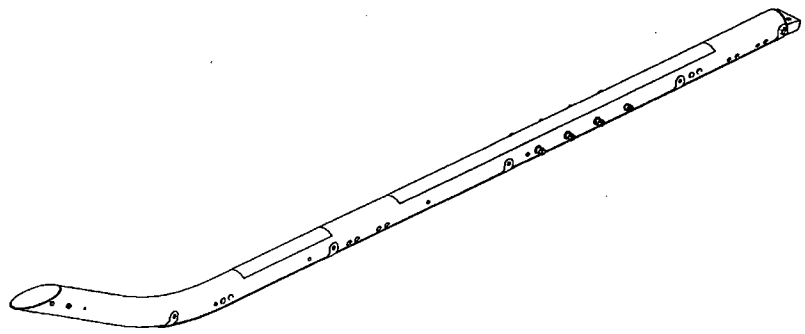


D4168-043 350 SKIDTUBE ASSEMBLY, LH



D4168-044 350 SKIDTUBE ASSEMBLY, RH

RELEASED
2010 -09- 15

| | | |
|---|---|---|
| DESIGN | SC | DART AEROSPACE USA, INC. PORT HADLOCK, WA |
| DRAWN | SC | |
| CHECKED | | DRAWING NO. D4168 REV. A |
| MFG. APPR. | | SHEET 3 OF 11 |
| APPROVED | | TITLE 350 SKIDTUBE ASSEMBLY SCALE NTS |
| DE APPR. | | |
| DATE 10.08.09 | | |

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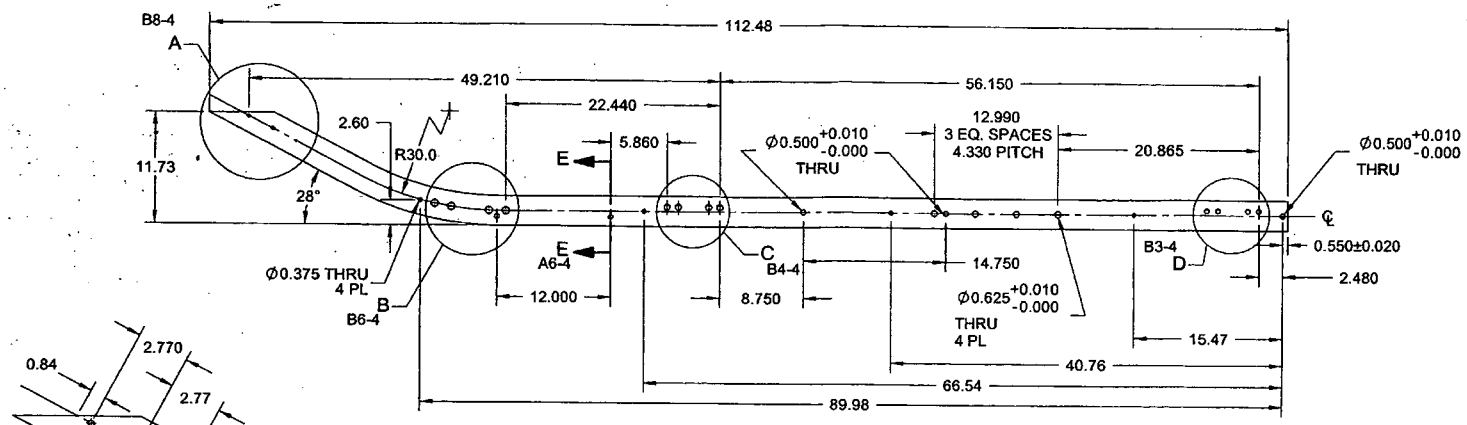
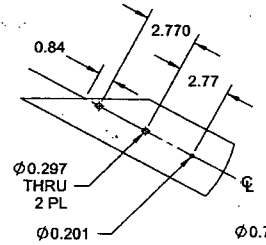



**D4168-1 LH SKIDTUBE**




D7-4

**DETAIL A**
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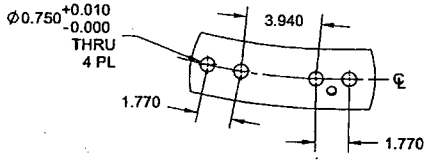


D7-4

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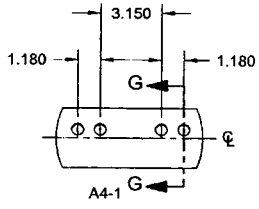


D5-4

**DETAIL C**
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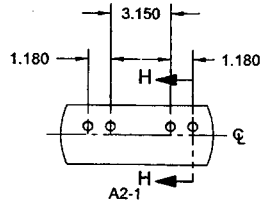


D3-4

**DETAIL D**
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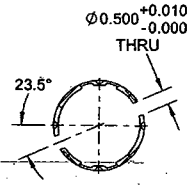
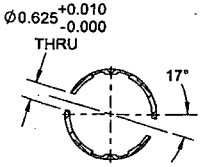


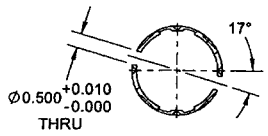

D6-4

**SECTION E-E**
SCALE 3X, 2 PL




B4-4

**SECTION G-G**
SCALE 3X, 4 PL




**SECTION H-H** B2-4
SCALE 3X, 4 PL

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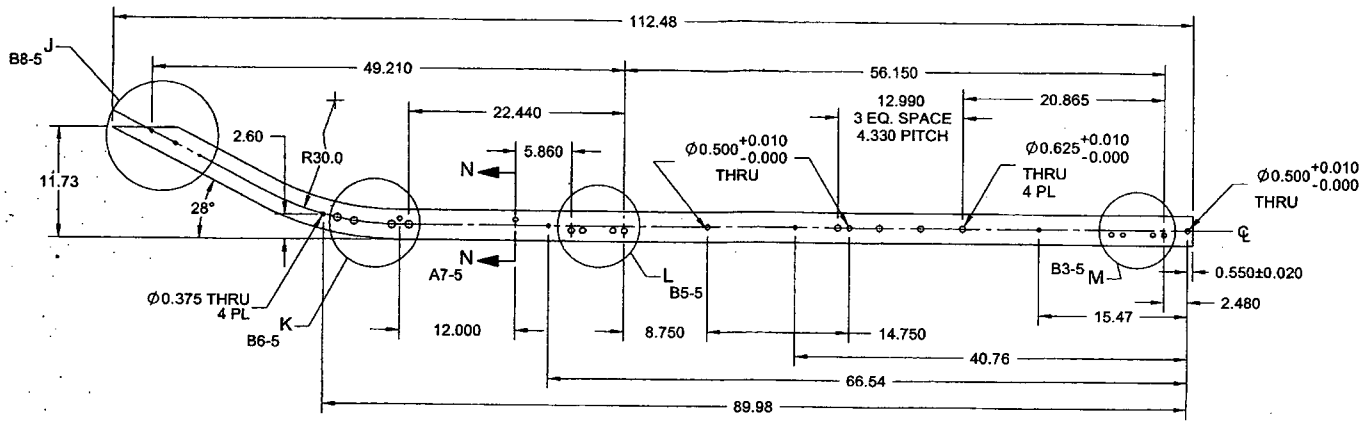
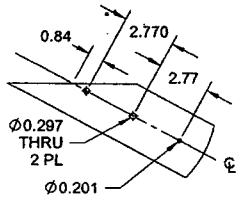



**D4168-2 RH SKIDTUBE**

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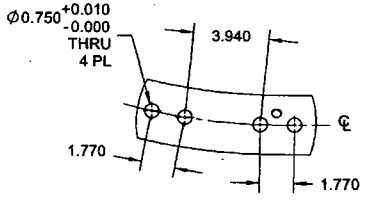


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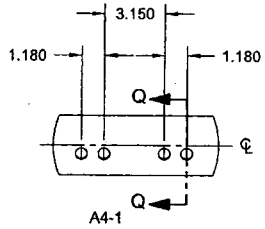


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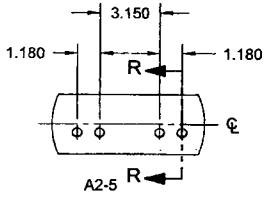


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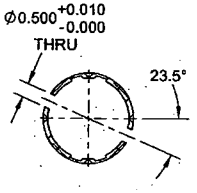
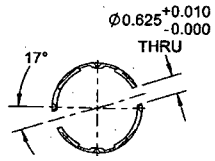
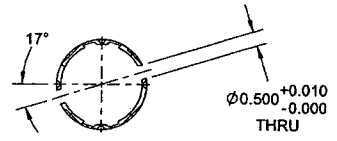



**SECTION N-N**
SCALE 3X, 2 PL




**SECTION Q-Q**
SCALE 3X, 4 PL




**SECTION R-R**
SCALE 3X, 4 PL

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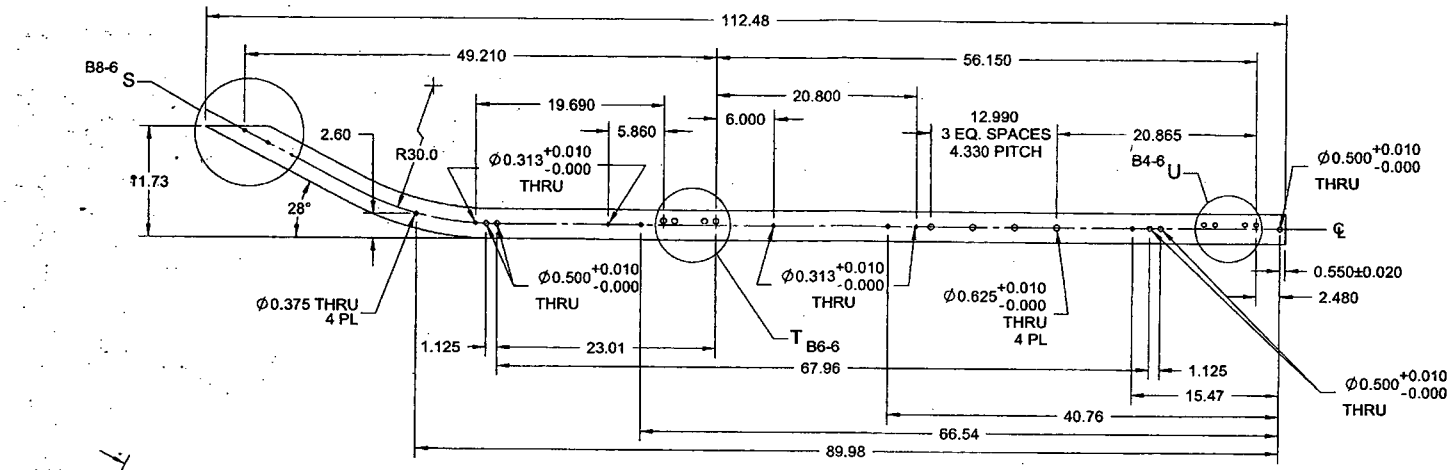
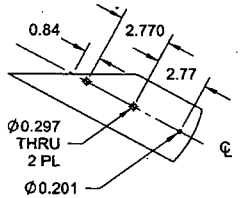
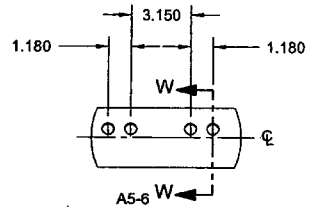


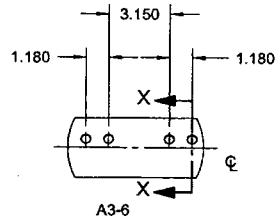

**D4168-3 LH SKIDTUBE**



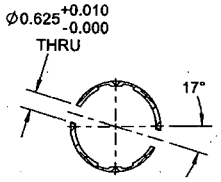

**DETAIL S** D8-6
SCALE 2X



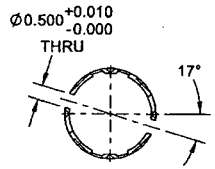

**DETAIL T** C5-6
SCALE 2X




**DETAIL U** D3-6
SCALE 2X




**SECTION W-W** B6-6
SCALE 3X, 4 PL




**SECTION X-X** B4-6
SCALE 3X, 4 PL

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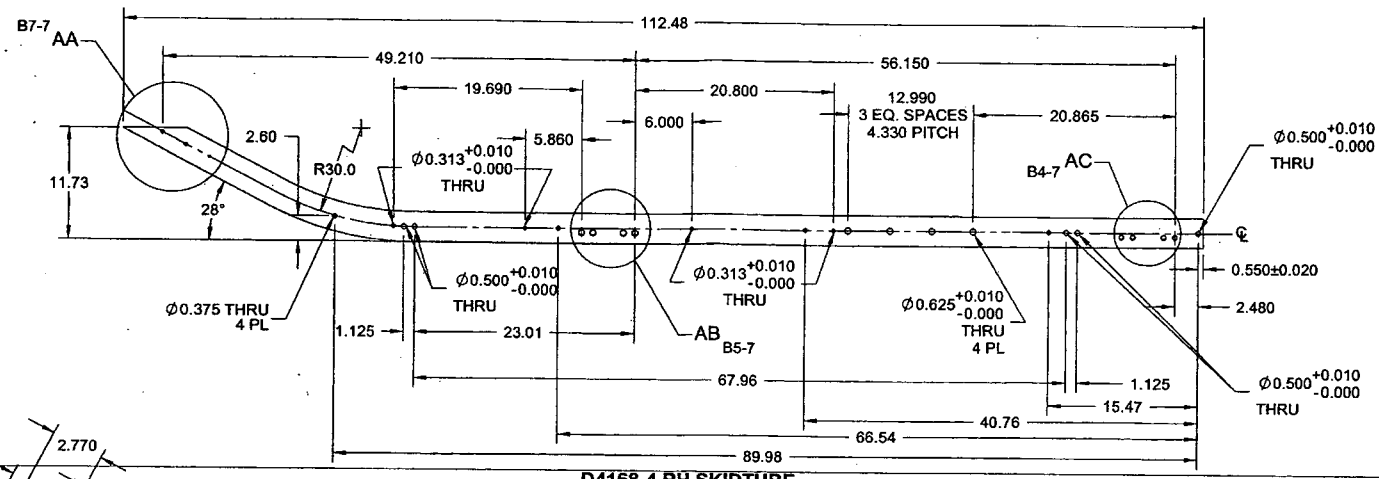
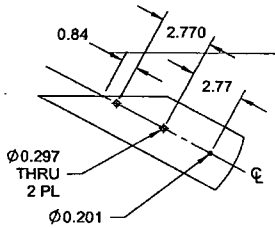



**D4168-4 RH SKIDTUBE**




**DETAIL AA** D7-7
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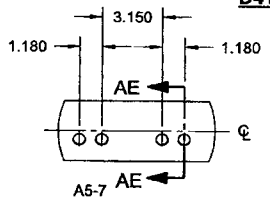


**DETAIL AB** C4-7
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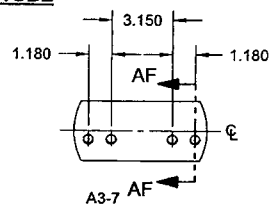


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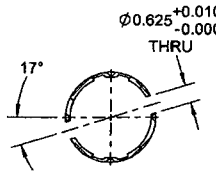
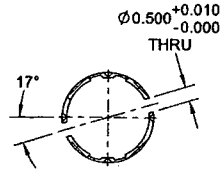
SCALE 2X




**SECTION AE-AE** B6-7
SCALE 3X, 4 PL




**SECTION AF-AF** B4-7
SCALE 3X, 4 PL

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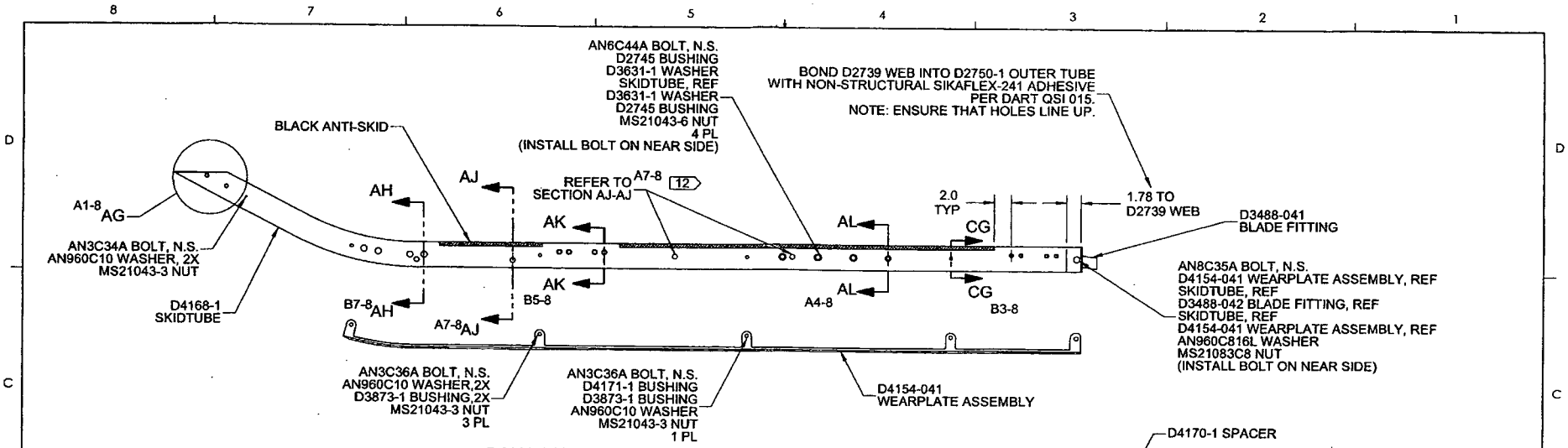
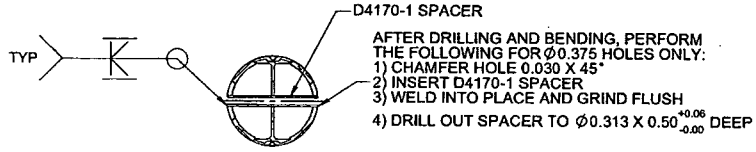
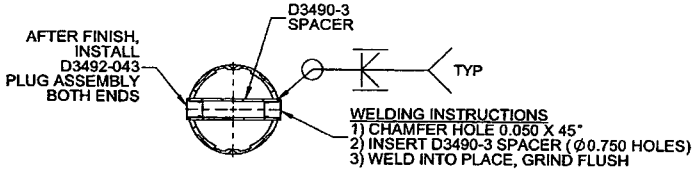



## D4168-041 350 SKIDTUBE ASSEMBLY, LH



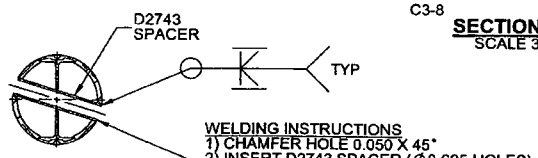

C3-8

**SECTION CG-CG**
SCALE 3X, 4 PL



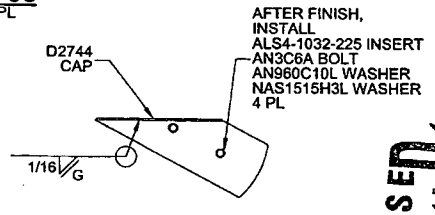

C7-8

**SECTION AH-AH**
SCALE 3X, 4 PL



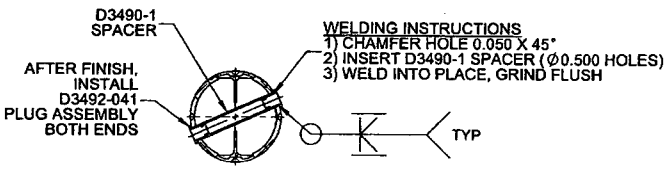

C6-8

**SECTION AK-AK**
SCALE 3X, 4 PL



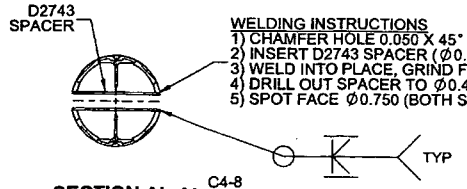

D8-8

**DETAIL AG**
SCALE 2X




C6-8, D5-8

**SECTION AJ-AJ**
SCALE 3X, 4 PL




C4-8

**SECTION AL-AL**
SCALE 3X, 4 PL
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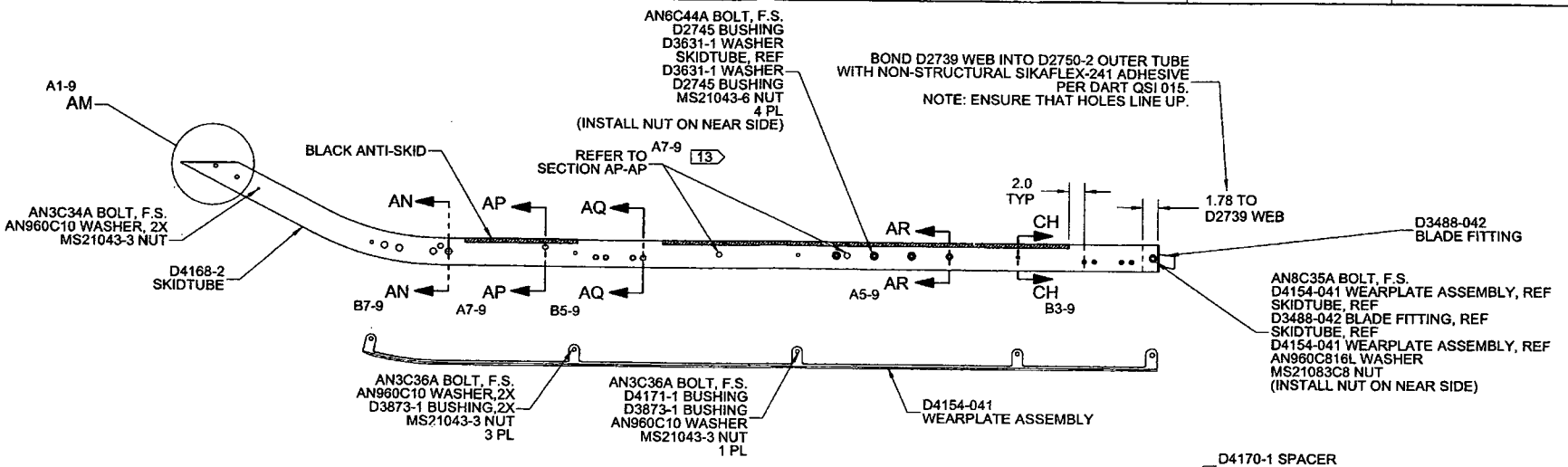
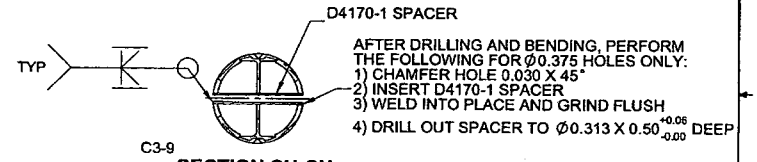
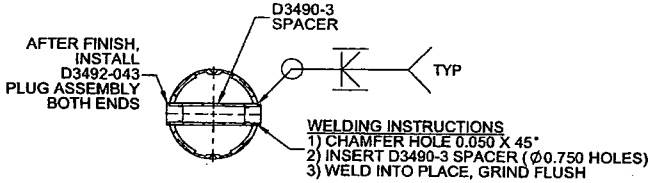


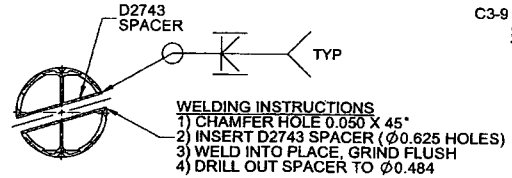

## D4168-042 350 SKIDTUBE ASSEMBLY, RH



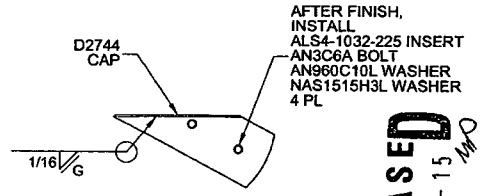

**SECTION CH-CH**
SCALE 3X, 4 PL




**SECTION AN-AN**
SCALE 3X, 4 PL




**SECTION AQ-AQ**
SCALE 3X, 4 PL




**DETAIL AM**
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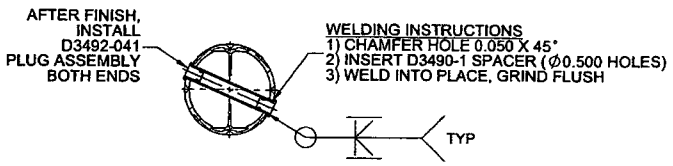


**SECTION AP-AP**
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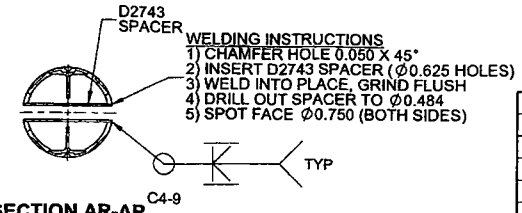


**SECTION AR-AR**
SCALE 3X, 4 PL
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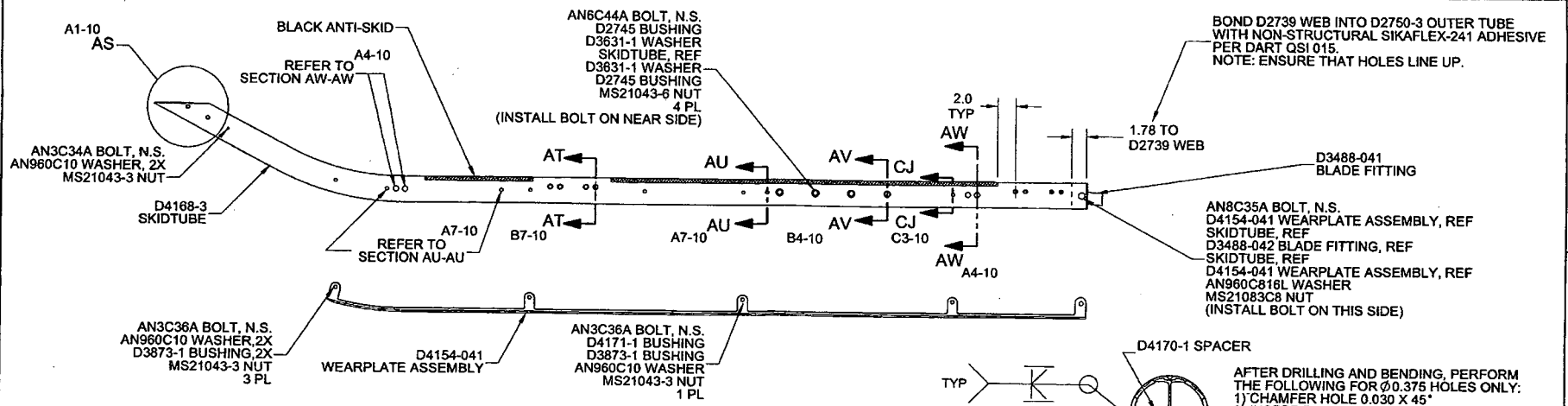
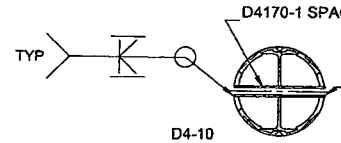
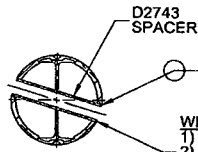



**D4168-043 350 SKIDTUBE ASSEMBLY, LH**




AFTER DRILLING AND BENDING, PERFORM THE FOLLOWING FOR Ø0.375 HOLES ONLY:
1) CHAMFER HOLE 0.030 X 45°
2) INSERT D4170-1 SPACER
3) WELD INTO PLACE AND GRIND FLUSH
4) DRILL OUT SPACER TO Ø0.313 X $0.50^{+0.06}_{-0.00}$ DEEP

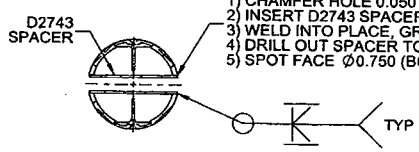
**SECTION CJ-CJ**
SCALE 3X, 4 PL



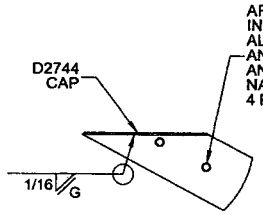

WELDING INSTRUCTIONS
1) CHAMFER HOLE 0.050 X 45°
2) INSERT D2743 SPACER (Ø0.625 HOLES)
3) WELD INTO PLACE, GRIND FLUSH
4) DRILL OUT SPACER TO Ø0.484

**SECTION AT-AT** D6-10
SCALE 3X, 4 PL

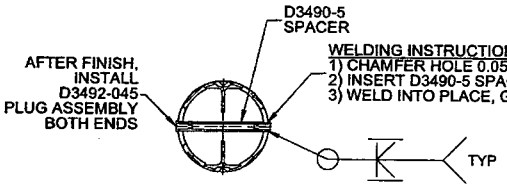
WELDING INSTRUCTIONS
1) CHAMFER HOLE 0.050 X 45°
2) INSERT D2743 SPACER (Ø0.625 HOLES)
3) WELD INTO PLACE, GRIND FLUSH
4) DRILL OUT SPACER TO Ø0.484
5) SPOT FACE Ø0.750 (BOTH SIDES)




**SECTION AV-AV** D4-10
SCALE 3X, 4 PL
(HARDWARE REMOVED FOR CLARITY)

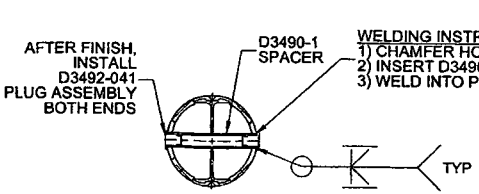



**DETAIL AS** D8-10
SCALE 2X




WELDING INSTRUCTIONS
1) CHAMFER HOLE 0.050 X 45°
2) INSERT D3490-5 SPACER (Ø0.313 HOLES)
3) WELD INTO PLACE, GRIND FLUSH

**SECTION AU-AU** D5-10, D6-10
SCALE 3X, 4 PL




WELDING INSTRUCTIONS
1) CHAMFER HOLE 0.050 X 45°
2) INSERT D3490-1 SPACER (Ø0.500 HOLES)
3) WELD INTO PLACE, GRIND FLUSH

**SECTION AW-AW** D4-10, D7-10
SCALE 3X, 4 PL

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| | | |
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| DRAWN | SC | |
| CHECKED | | DRAWING NO. D4168 REV. A |
| MFG. APPR. | | SHEET 10 OF 11 |
| APPROVED | | TITLE 350 SKIDTUBE ASSEMBLY SCALE NTS |
| DE APPR. | | |
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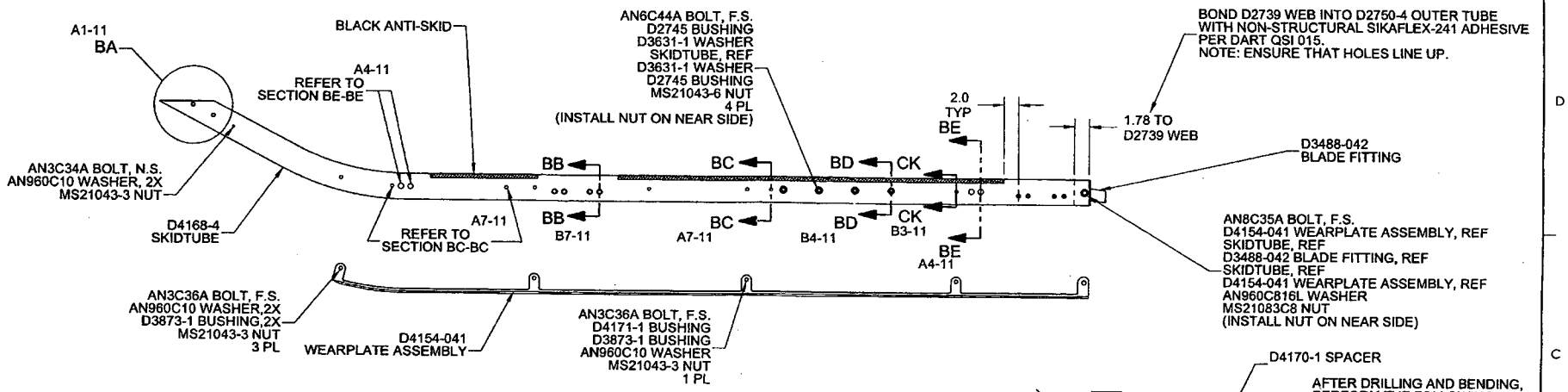
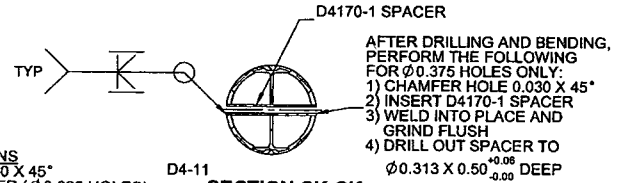



**D4168-044 350 SKIDTUBE ASSEMBLY, RH**

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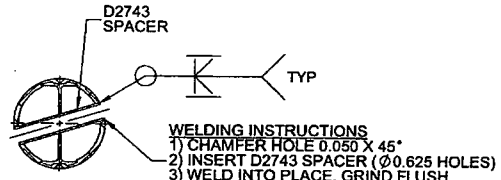


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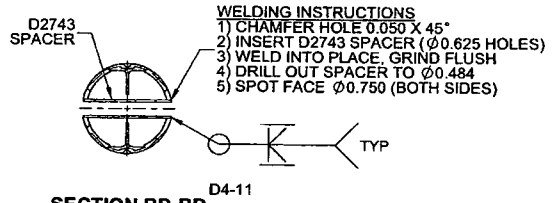
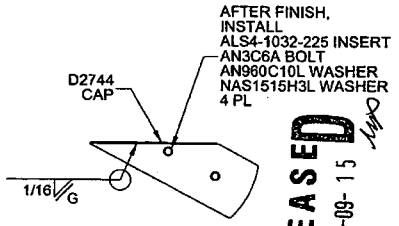
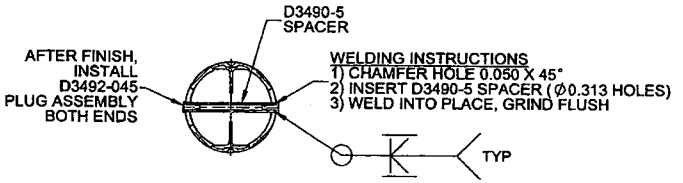


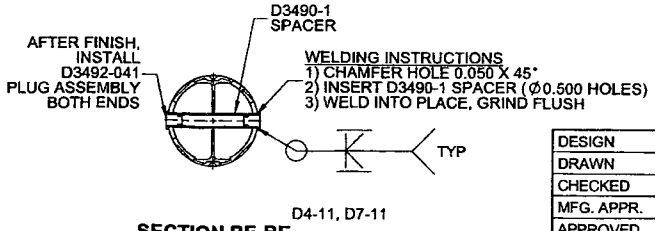

**SECTION BD-BD**
SCALE 3X, 4 PL
(HARDWARE REMOVED FOR CLARITY)




**DETAIL BA**
SCALE 2X




**SECTION BC-BC**
SCALE 3X, 4 PL




**SECTION BE-BE**
SCALE 3X, 4 PL

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| APPROVED | | TITLE 350 SKIDTUBE ASSEMBLY SCALE NTS |
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NO. 306

# AWS D17.1.2001
## QUALIFICATION TEST RECORD

**Name:** Barclay Elliott
**Job #:** 90946 0
**Part #:** D350-636-011
**Description:** Skid tube
**Welding Process:** Tig[✓] Mig[ ]
**Base materiel:** Aluminium
**Current:** AC[✓] DC[ ]

## TEST REQUIREMENTS AND RESULTS

| | | |
|---|---|---|
| **Visual:** | pass[✓] | fail[ ] |
| **Incomplete Penetration:** | pass[✓] | fail[ ] |
| **Incomplete Fusion:** | pass[✓] | fail[ ] |
| **Cracks:** | pass[✓] | fail[ ] |
| **Overlap (cold lap)** | pass[✓] | fail[ ] |
| **Undercut:** | pass[✓] | fail[ ] |
| **Pin holes:** | pass[✓] | fail[ ] |
| **Porosity (surface):** | pass[✓] | fail[ ] |
| **Coloration:** | pass[✓] | fail[ ] |
| **Burn through:** | pass[✓] | fail[ ] |

**Qualifier** [signature] **Date of Test Coupon** 12-10-12

**Welder** Barclay Elliott **Date of Test Coupon** 12-10-12

The above named individual is qualified in accordance with AWS D17.1.2001 to weld